- Earth is a naturally radioactive planet,
  and we are all subjected to significant
  and unavoidable natural background radiation.

- Unlike with toxic wastes,
  the hazard from radioactive waste declines with time.
  The longer the containment, the lower the actual hazard.

- For intermediate-level waste,
  ca. 80% of initial radioactivity
  will have been lost after 100 years,
  and very little activity will remain after 100,000 years.

Modified from http://www.geolsoc.org.uk/webdav/site/GSL/shared/pdfs/our%20views/radwaste/RadwasteStyles.pdf

Background Radiation and EPA and NRC Regulations

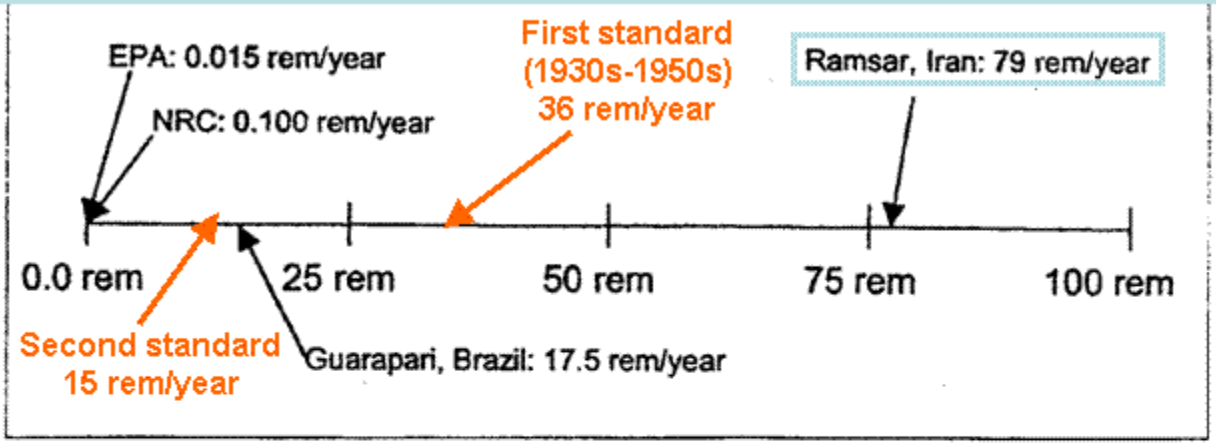


Fig. 2. Scale comparing EPA and NRC regulatory limits to natural background radiation environments (100 rem = 1 sievert; 100 rad = 1 gray)

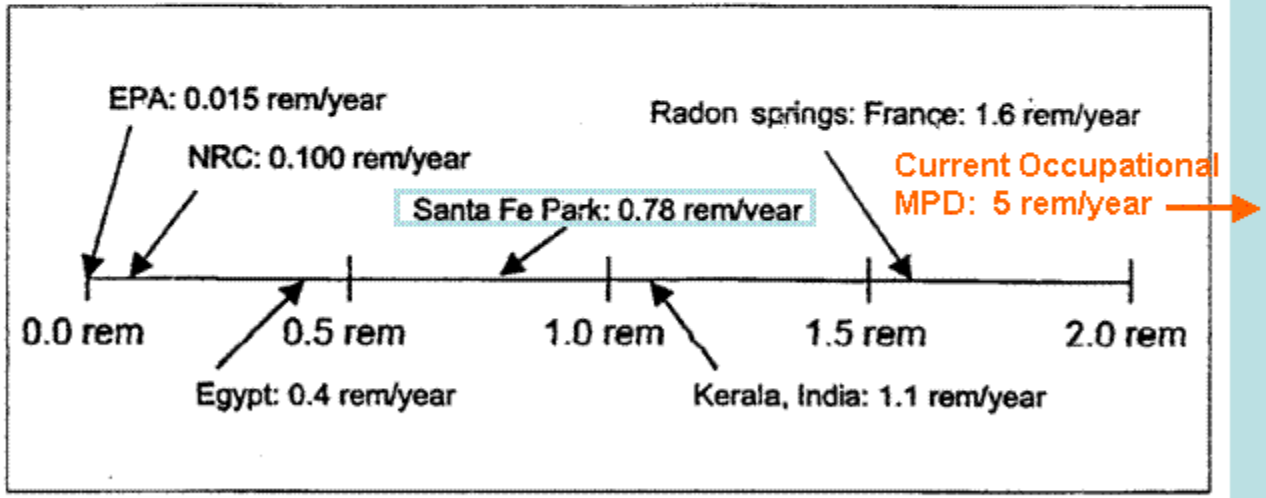
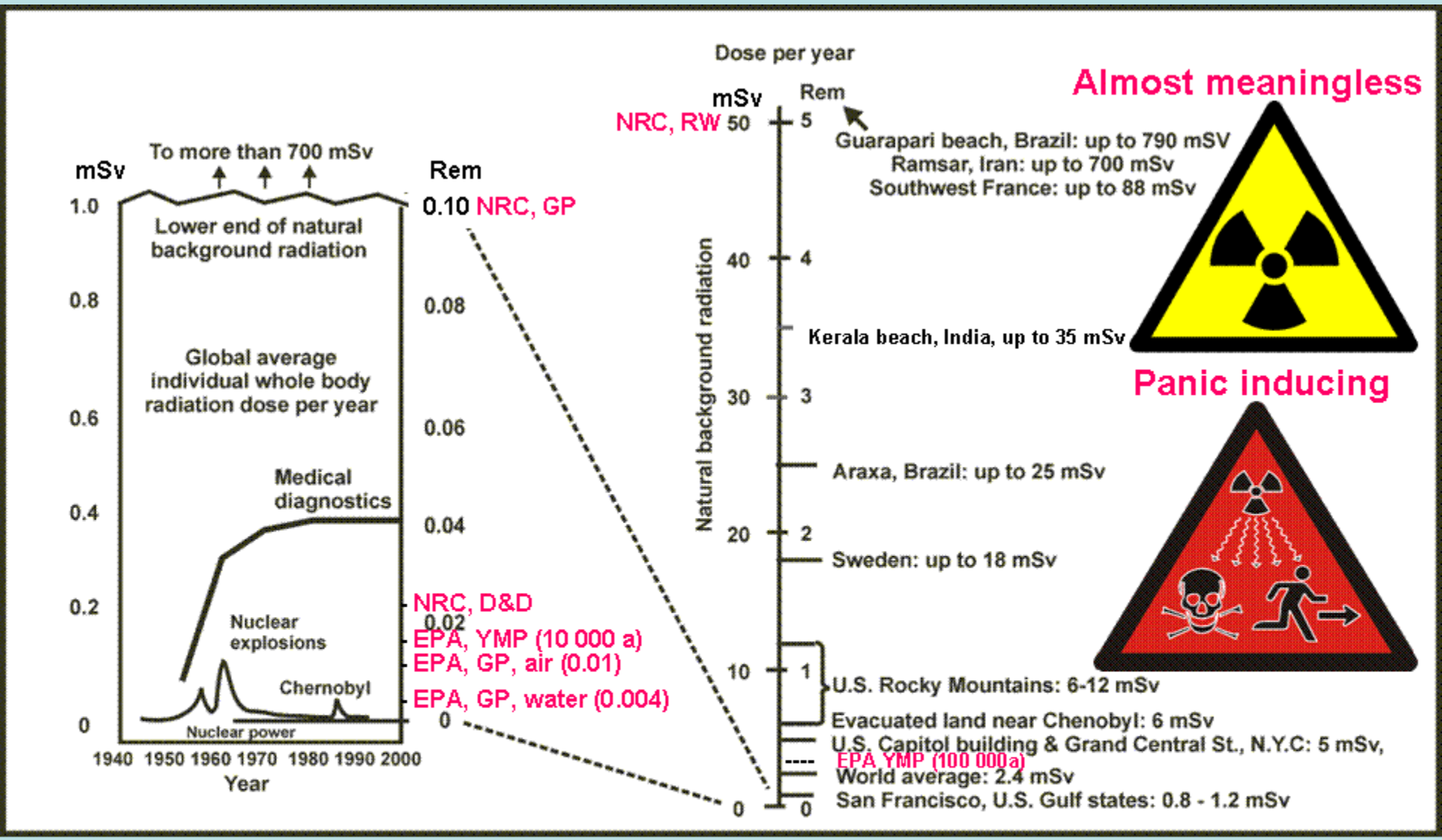


Fig. 3. Expanded scale comparing EPA and NRC regulatory limits to natural background radiation environments (100 rem = 1 sievert; 100 rad = 1 gray)

From Mark M. Hart, "Disabling the terror of radiological dispersal," *Nuclear News* July 2003

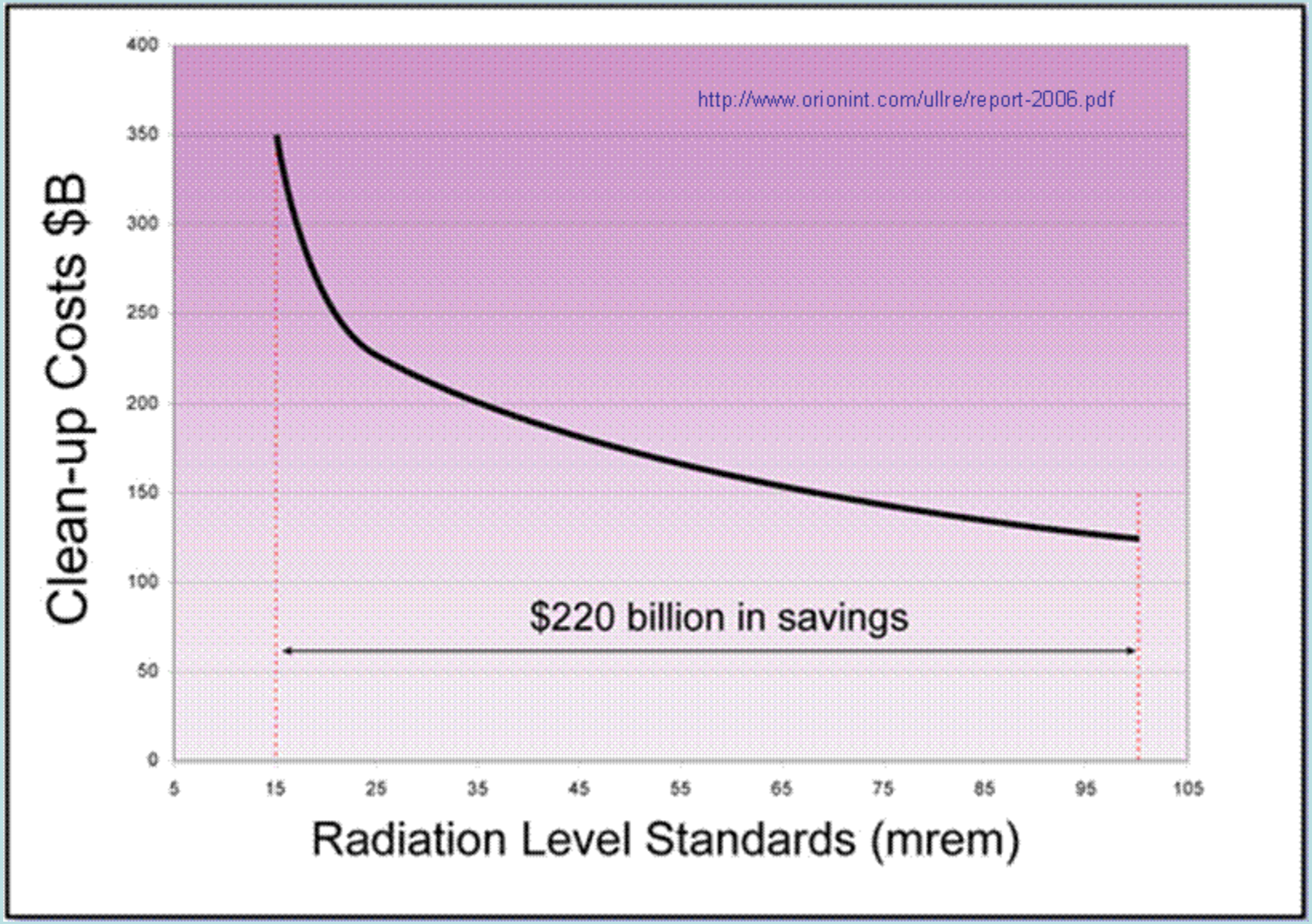


Modified from a
Figure prepared by Ted Rockwell from data found in "Radiation Risk and Ethics", Z. Jaworoski, published in Physics Today, American Institute of Physics, September, 1999 and "Ionizing Radiation and Radioactivity in the 20th Century", Z. Jaworoski, presented at the International Conference on Radiation and its Role in Diagnosis and Treatment", Tehran, Iran October, 2000.

http://www.cns-snc.ca/media/uploads/branch_data/branches/Toronto/radiation/natural_and_human_radiation.html
http://hps.org/publicinformation/ate/faqs/regdoselimits.html
http://dspace.mit.edu/bitstream/handle/1721.1/41588/213482682.pdf?sequence=1

Current clean-up cost for US/DOE facilities is estimated at $350 billion for EPA standard of 15 mrem above background

(15 mrem is <5% of average natural background in USA)



Some economy issues

Each human life hypothetically saved in a Western industrial society by implementation of the present radiation protection regulations is estimated to cost about $2.5 billion.

Such costs are absurd and immoral—especially when compared to the relatively low costs of saving lives by immunization against measles, diphtheria, and pertussis, which in developing countries entails costs of $50 to $99 per human life saved.